

## TITLE

"POST ANCHOR"

## FIELD OF THE INVENTION

5 This invention relates to a post anchor. In particular, the post anchor is used for holding fencing posts, sign posts or the like and therefore will be described in this context. However, it will be appreciated that the post anchor may be used to hold posts for other uses.

## BACKGROUND OF THE INVENTION

10 Most sign posts and fencing posts are permanently fixed in position within the ground. Normally, a post is fixed in position by digging a hole within the ground, locating the post within the hole, pouring concrete around the post and allowing the concrete to set.

This process is very time consuming and labour intensive. Further, the above process is not conducive when providing temporary posts for signage or fencing.

15 To overcome the above disadvantages, post anchors have been developed in which each post anchor is driven in the ground and a post attached to the post anchor. Examples of such posts are shown in US Patent No. 6,039,298, US Patent No. 4,588,157 and US Patent No. 20 2,349,110.

Although these types of post anchors are effective, they are expensive to manufacture due to the number of components that must be joined together to form the post anchor. Further, most of the anchors that are produced use heavy-duty components that add to the cost of the post anchor. Hence, the cost of producing the post anchors has limited the use of the post anchor to specific applications.

## OBJECT OF THE INVENTION

25 It is an object of the invention to overcome or alleviate one or more of the above disadvantages or provide the consumer with a useful or commercial choice.

## SUMMARY OF THE INVENTION

30 In one form, although not necessarily the only or broadest form,

the invention resides in a post anchor comprising:

a holder to receive and hold at least one post;

a ground engaging member for driving in a ground surface, said ground engaging member attached to the holder;

5                   said ground engaging member including a central web, a first flange and a second flange;

                  said first flange extending away from a first side of the central web and said second flange extending away from a second side of the central web;

10                  wherein said central web, first flange and second flange are integrally formed.

                  The holder may comprise a plurality of collets to hold the post. A clamping member may be located around the collets to prevent the post being removed from the collets.

15                  Alternately, the holder may be a recess to which a post is fastened.

                  Still alternatively, the holder may include one or more uprights that are used to fasten a post.

                  Still alternatively, the holder may include a post support.

20                  The central web may be substantially planar. A point may be located adjacent an end of the central web to assist in driving the central web into the ground.

                  The first flange and second flange may be substantially planar.

                  The first flange, second flange and central web may be formed from a single sheet of metal. The sheet may be folded to form the first flange, second flange and central web.

                  The angled formed between the first flange and central web and/or the second flange and central web may be acute to obtuse.

                  The holder may be welded to the engaging member. Preferably, the holder is welded to the central web.

30                  In another form, the invention resides in a method of manufacturing a post anchor comprising the steps of:

folding a single sheet of metal to form a ground engaging member having a central web, a first flange and a second flange;

said first flange extending away from a first side of the central web and said second flange extending away from a second side of the central web; and

attaching a holder to the ground engaging member to form the post anchor.

The method may further include the step of cutting the sheet of metal.

#### BRIEF DESCRIPTION OF THE DRAWINGS

An embodiment of the invention, by way of example only, will be described with reference to the accompanying drawings in which:

FIG. 1 is a perspective view of a post anchor according to a first embodiment of the invention;

FIG. 2 is a front view of the post anchor shown in FIG. 1;

FIG. 3 is a perspective view of a ground engaging member prior to being folded;

FIG. 4 is a perspective view of the ground engaging member of FIG. 3 after the ground engaging member has been folded;

FIG. 5 is a perspective view of a post anchor according to a second embodiment of the invention;

FIG. 6 is a top view of the post anchor shown in FIG. 1;

FIG. 7 is a perspective view of a post anchor according to a third embodiment of the invention;

FIG. 8 is a top view of the post anchor shown in FIG. 1;

FIG. 9 is a perspective view of a post anchor according to a fourth embodiment of the invention;

FIG. 10 is a top view of the post anchor shown in FIG. 1;

FIG. 11 is a perspective view of a post anchor according to a fifth embodiment of the invention;

FIG. 12 is a top view of the post anchor shown in FIG. 1;

FIG. 13 is a top view of a fence constructed using the post

anchors shown in FIG. 1; and

FIG. 14 is a further top view of another fence constructed using the post anchors shown in FIG. 1.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

5                FIGS. 1 and 2 show a post anchor 10 comprising a holder 20 and a ground engaging member 30. The post anchor holds a post (not shown) securely with respect to ground. The post may be used to carry signage, or may form part of a fence, or may be used for other like purposes.

10              The holder 20 is used to hold the post within the post anchor 10. The holder 20 is formed from two collets 21,22 that define a space in which the post sits. A clamping member 23 engages a ridge 24 located on each of the collets, thereby urging the collets into engagement with the post.

15              The ground engaging member 30 includes a central web 31, a first flange 32 and a second flange 33. The central web 31 has its lower end formed into a point to assist in driving the ground engaging member into ground.

20              The first flange 32 extends outwardly away from a first side 35 of the central portion whilst the second flange 33 extends outwardly from a second side 36 of the central web 31. That is, the first flange 32 is located on an opposite side of the central web 31 to that of the second flange.

25              An angle formed between the central web 31 and the first flange 32 and an angle formed between the central web 31 and the second flange 33 is obtuse. The angle in this embodiment is 135 degrees from the central web 31 to the first flange 32 and second flange respectively. Further, the angles are substantially the same. Both the first flange 31 and the second flange 32 are tapered.

30              The ground engaging member 30 is produced from a planar metal sheet that has been cut to the desired shape as shown in FIG. 3. It should be appreciated that the metal sheet may be cut by any means including punching, laser cutting, water cutting, etc.

Once the sheet has been cut to the desired shape, the metal sheet is folded to form the ground engaging member 30. The collets 21,22

are then welded to a space located on the central web of ground engaging member 30 to complete manufacture of the ground anchor 10.

FIGS. 5 and 6 show a further embodiment of a post anchor 10.

5 In this embodiment, the holder 20 is in the form of two upright members 25 that that are welded to the ground engaging member 30. Holes 26 are located within the uprights 25 to attach a post using fasteners. A rectangular post is typically used with this post anchor.

FIGS. 7 and 8 show another embodiment of a post anchor 10.

10 The holder 20, in this embodiment, is a single upright 27 that is welded the ground engaging member 30. The single upright 27 is normally used to attach a metal post to the post anchor 10 using fasteners (not shown) such as tek screws.

FIGS. 9 and 10 show yet another embodiment a post anchor

15 10. In this embodiment, the holder 20 is in the form of a post support 28 that is welded to the ground engaging member 30. The post support 28 fits inside or outside a metal post to attach the post to the post anchor 10. It should be appreciated that there may be more than one .

FIGS. 11 and 12 show a variation of the post anchor 10 of FIG

20 1. In this embodiment, the angle between the central web 31 and the flange 32 and the second flange 33 is 90 degrees.

FIGS. 13 and 14 show top views of fences 40 that have been

25 produced using the post anchors. The first flange 32 and second flange 33 of each anchor 10 provide lateral stability to the fences 40. The lateral stability is greatest at the top of the ground engaging member 30 where the width of the first flange 32 and second flange 33 is greatest. The central web 31 also provides some lateral stability. The central web 31 provides sufficient longitudinal stability to the fences 40.

The lateral stability of the fences 40 need to greater than the

30 longitudinal stability. The post anchor 10 provides this through its configuration.

The post anchor 10 provides the advantage that its configuration provides stability using a minimum amount of material. Further,

the post anchor 10 is uncomplicated to manufacture making the post anchor cost effective. Still further, the post anchor can be easily driven into ground using known techniques used for driving other post anchors into ground.

5 It should be appreciated that various other changes and modifications may be made to the embodiment described without departing from the spirit or scope of the invention.